International Evidence on Fiscal Crises and Policy Responses

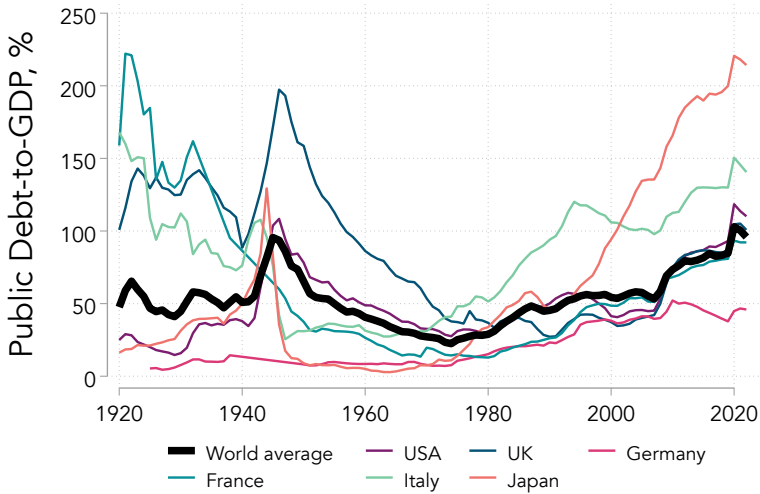
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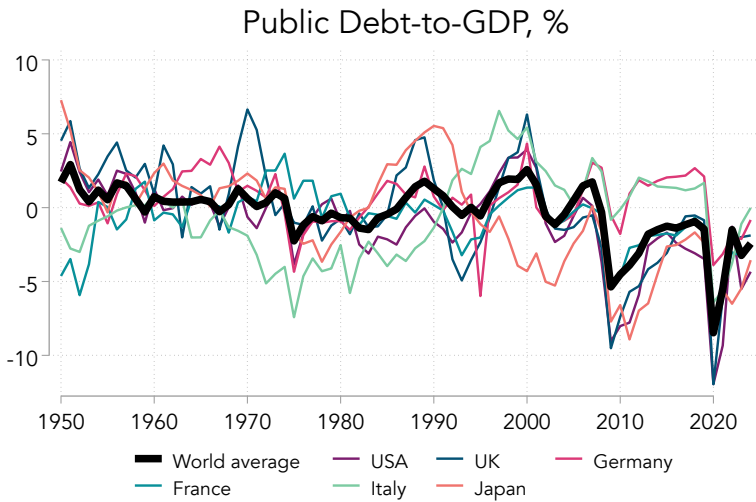
October 16, 2025

Rising Public Debt-to-GDP Ratios



Note: World average is nominal GDP-weighted (in USD) average based on a balanced sample.

Declining Primary Balance-to-GDP Ratios



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This Project

1. International evidence on the **characteristics of fiscal crises**

2. International experience with **reducing deficits and debt levels**

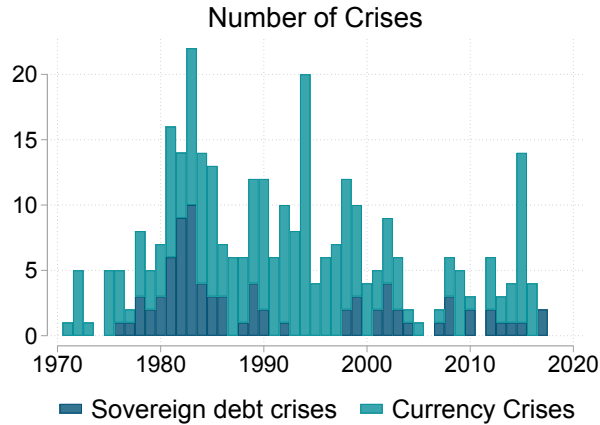
1. Fiscal Crises: The International Experience

Fiscal Crises

- What are the characteristics of fiscal crises?
- Are there commonalities across fiscal crises?
- Are fiscal crises somewhat predictable?
  1. Sudden rollover crisis (Cole Kehoe '00)
  2. Slow moving bad equilibrium with rising interest cost (Lorenzoni Werning '19)
  3. Deterioration of fundamentals (Krugman '79, Dovis Bocola '19)
- Fiscal crises considered here: sovereign debt crises and currency crises
  - Classification: Laeven and Valencia '20
  - Worst case outcomes
  - Other definitions possible (e.g., spike in yields)

Fiscal Crises: Sovereign Debt and Currency Crises

- Sovereign debt crisis
  - Default/restructuring
  - 80 episodes between 1970 and 2017
  - Mostly in in EMs
- Currency crisis
  - Year-on-year depreciation of at least 30%
  - 240 episodes, 90% in EMs
  - Often reflects underlying fiscal crisis (Krugman '79, Obstfeld '94)

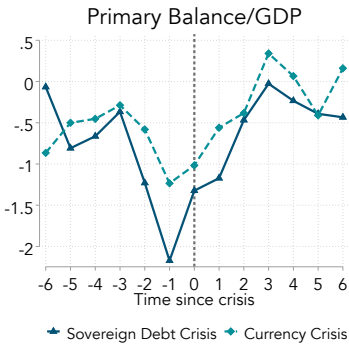


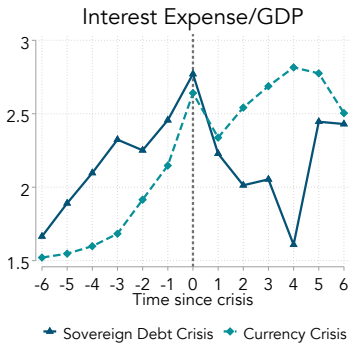
Fiscal Crises: Government Primary Balance and Interest Expenses

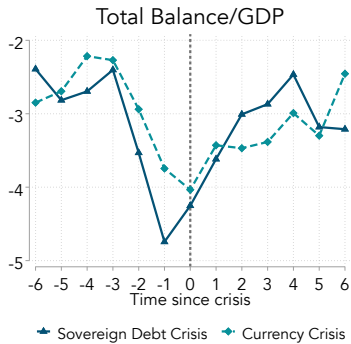
- Next: simple **event study** around fiscal crises to understand their characteristics

Fiscal Crises: Government Primary Balance and Interest Expenses

- Next: simple **event study** around fiscal crises to understand their characteristics
- Deterioration in primary balance, rising interest expenses, and worsening total gov't balance several years before fiscal crisis

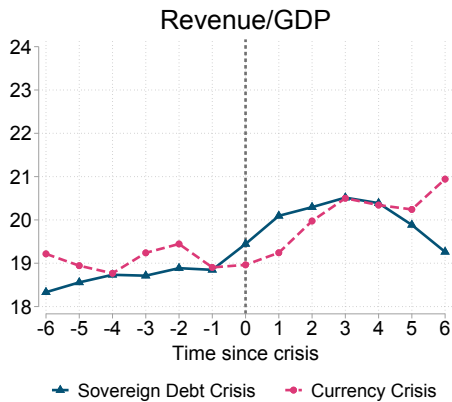


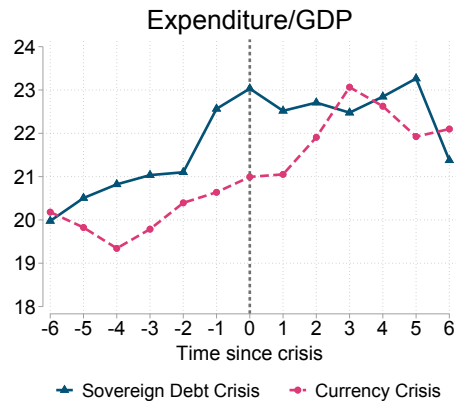




Fiscal Crises: Government Revenue and Spending

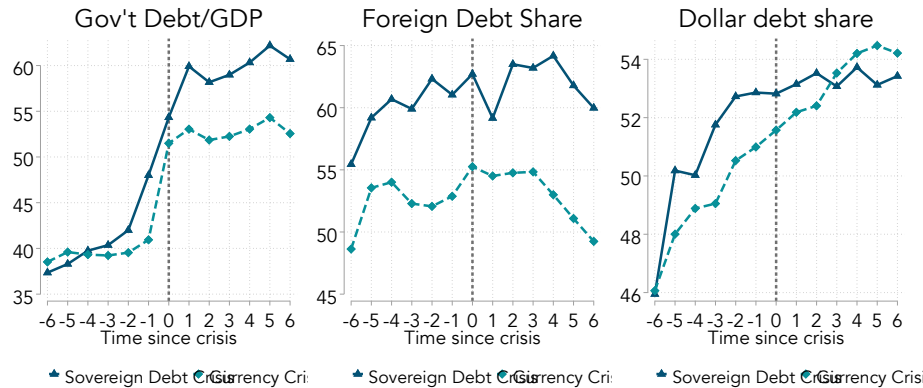
- Why does primary balance deteriorate?
- Rapid rise in spending-to-GDP before sov debt crises
- Revenues stable/declining





Fiscal Crises: Rising Government Debt and Foreign Share of Debt

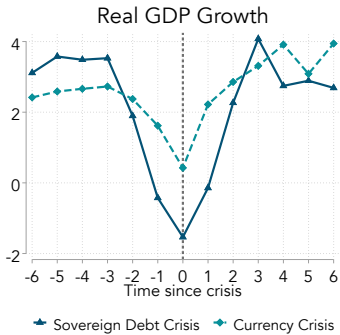
- Spike in debt: fall in primary balance, falling GDP (denominator), revaluation of FC debt
- Crises often occur at much lower debt levels than current advanced economy levels

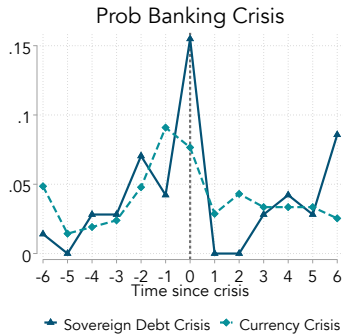


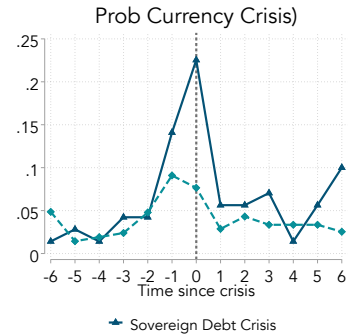
Note: Gov't debt defined as central government debt.

Fiscal Crises: Real GDP Growth, Banking Crises, and Currency Crisis

- Sharp decline in GDP growth up to crisis
- Increase in risk of banking and currency crisis up to and during fiscal crises
  Kaminsky Reinhart '99; Laeven Valencia '18
- Interaction between fiscal and financial stability Farhi Tirole '18







2. International Experience Reducing Deficits and Debt Ratios

Reducing Deficits and Debt Ratios

- Fiscal crises are preceded by **deficits** and **debt runups**, often driven by **surging spending** and financed by **borrowing from abroad**
  - Increased vulnerability to **adverse shocks** (interest rate spike, recession, financial crisis)
- Increased risk of crisis when fundamentals are weak
  - Reducing debt and moving out of "crisis zone" can lead to lower interest cost and benefit economy (Cole Kehoe '00)

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- How have countries responded to elevated debt levels and reduced debt to avoid crises?
- Simple point at the outset: Wide range of outcomes for countries with high debt levels
  - On average, no reduction in debt after 15 years when countries exceeded 100% debt to GDP threshold (IMF 2012)
  - Debt-to-GDP process is very persistent

Public Debt Reduction: Mechanics

$$\Delta b_t = d_t + \frac{(r_t - g_t)}{1 + g_t} b_{t-1} + residual_t$$

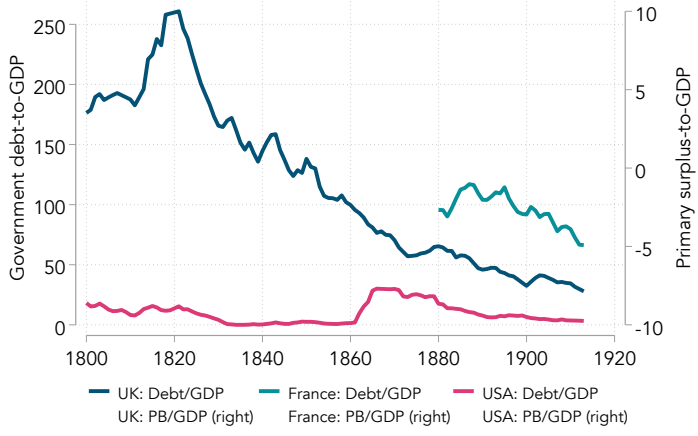
b = debt/GDP, d = primary deficit, r = real interest rate, g = real GDP growth rate

1. Primary surpluses
2. Strong growth
   - Increases denominator
   - Facilitates reducing primary surpluses
3. Low real interest rates
   - Financial repression
   - Unexpected inflation
4. Default/restructuring
5. Below-the-line operations; asset sales

Successful Large Public Debt Reductions

19th Century Examples: UK, US, and France

- 19th century: driven mostly by **large primary surpluses**
  Eichengreen et al '19
  - UK after Napoleonic War
  - US after Civil War
  - France after Franco-Prussian War
- Key factor: limited franchise and politically influential creditors

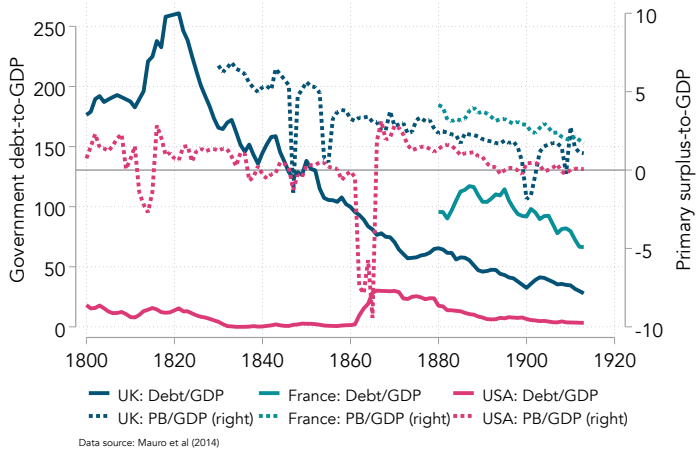


Data source: Mauro et al (2014)

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20th Century Examples

- Interwar period:
  - Growth
  - Restructuring, war debt relief, and unilateral default ... (Reinhart and Trebesch 2014)
  - Primary surpluses
- After WWII: large debt reduction
  - Large role of low $r - g$
  - Strong growth
  - Financial repression (Reinhart Sbrancia '15)
  - Smaller but non-negligible role for primary surpluses (Acalin and Ball '23)
- Recent decades
  - Small, homogeneous, open economies: Belgium, Canada, Denmark, Ireland, Norway, Jamaica, ... (Arslanalp Eichengreen Henry '24)

Successful Large Public Debt Reductions since 1980

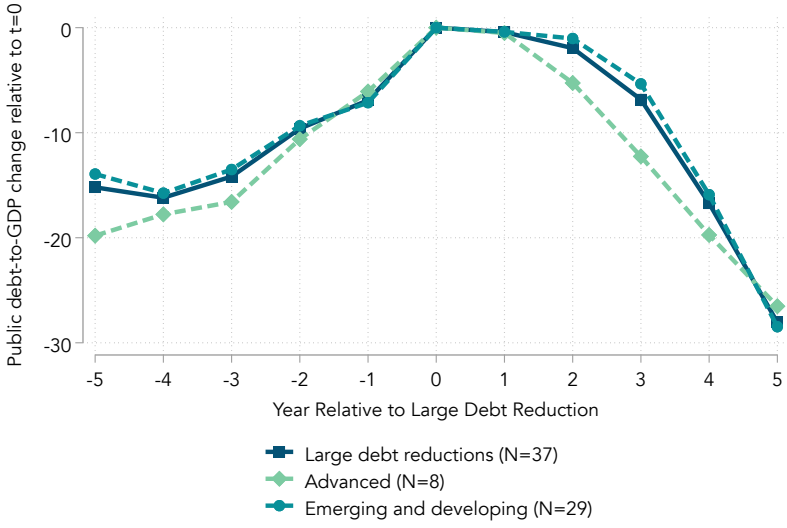
- Identify episodes of > 20 percentage point reduction in government debt-to-GDP over a 5-year period
  - Data: IMF WEO database

- Exclude reductions accompanied by a default/haircut

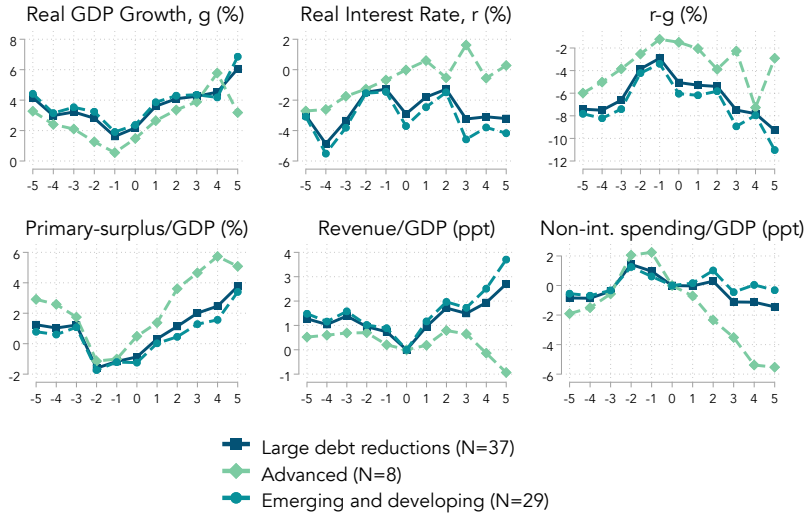
  Cruces Trebesch '14, Asonuma Trebesch '16

- Episodes:
  - (i) $N = 37$ episodes with complete data coverage
  - (ii) $N = 8$ advanced economy episodes, $N = 29$ emerging and developing economy episodes

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Lessons on How to Successfully Reduce Public Debt

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- **Design**: expenditure (esp. govt consumption) based, rather than tax based (Alesina Favero Giavazzi '19, Ardanaz et al '24)
  - In AEs where tax/GDP ratio are higher
  - US an exception given low tax/GDP ratio?

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- **Political consensus** required for successful debt reductions in democracies

Final Thoughts

- What does this imply for US?
  - Fiscal crisis? History suggests this is unlikely unless alternative global safe asset emerges and supplants Treasuries
  - Where would this come from?
  - Exhaustion of exorbitant privilege
- Baseline scenario: High and rising debt, testing limits of global treasury demand
  - But fiscal correction required
  - Higher taxes: Large potential tax base; in contrast to Europe and other advanced economy experiences
  - Reduced entitlement spending